

APR 13 2007

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120742**RESPONSE**

In accordance with the current Office Action, claims 1-2, 16, and 21-22 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Japanese Patent No. 60-259,319 to Inoue in view of Japanese Patent No. 6-8060 to Takeda et al. Claims 13-15 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Inoue in view of Takeda et al., and further in view of U.S. Patent 6,369,343 to Krenz et al. Claims 3-12 and 17-20 stand objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The Examiner states that the Inoue reference discloses a second mechanism (elements 35,36,34 in Figure 3) to automatically align the electrode (element 6) with a workpiece (element 7). It is also noted that the Takeda et al. reference teaches a first mechanism (elements 15, 23, etc.) that secures the workpiece into a fixed position for machining. Accordingly, the Examiner concludes that it would have been obvious to adapt the Inoue device in view of Takeda et al. to provide this to precisely machine the workpiece.

It is seen in the translation of the Inoue reference that an object to be machined 7 is placed on a bottom plate 20 of working unit 5 and an electrode 6 is attached to a movable plate 22. Further, the movable plate 34 is raised and lowered so that the forming electrode 6 is maintained opposite object 7 at a constant gap. The movable plate 34 is guided to the support guide shafts 35 via bushings 36. There is nothing to indicate that the object 7 is retained in position on the bottom plate 20.

With respect to the translation of the Takeda et al. reference provided by the Examiner, Applicants are confused regarding the application of "elements 15,23,etc." as a first mechanism which secures the workpiece into a fixed position for machining. This is not specifically explained by the Examiner and clarification is requested.

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While the Inoue device appears to disclose a mechanism for positioning an electrode in a manner that is movable into and out of engagement with a designated portion of the workpiece, it is not seen where automatic alignment of such electrode with the workpiece occurs due to the relationship between such mechanism and a mechanism for retaining the workpiece. The Examiner has combined the Takeda et al. reference with the Inoue reference since Takeda et al. discloses a mechanism for securing the workpiece in position. Applicants take the position that there is nothing to indicate or suggest that the device in the Inoue reference could or should be modified to include the mechanism in the Takeda et al. reference. Nevertheless, even if such combination could fairly be made, it still is not seen where a portion of the electrode positioning mechanism of Inoue would be connected to a portion of the workpiece retention mechanism of Takeda et al. so as to provide the automatic alignment between the electrode and workpiece as claimed.

Further, the Examiner states that since it is inherent for discharge machining to occur between an electrode and a workpiece, they must be at differing electric potentials. Thus, one skilled in the art would know that the electrode must be electrically insulated from the workpiece.

Regarding claim 2, it is not seen where mention of such electrical insulation for the electrode is made within any of the applied references. Thus, it is requested that the Examiner set forth exactly how elements 35, 34, and 36 would be connected to the workpiece fixture in Takeda et al. and still maintain electrical insulation of the electrode from the workpiece.

Regarding claim 16, it is not seen where any items in the Inoue or the Takeda et al. references are identified by the Examiner as being equivalent to the housing and locator member in such claim.

Accordingly, Applicants respectfully traverse the rejection of independent claims 1, 21 and 22, as well as claims 2 and 16 depending from claim 1, and request that such rejections be withdrawn.

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Regarding claims 13-15, the Krenz reference is applied by the Examiner for teaching the machining of the sides of an airfoil (turbine blade) and using a second electrode for machining the opposite side of a workpiece. Accordingly, it would have been obvious to adapt the Inoue/Takeda et al. combination to provide a third mechanism identical to the second mechanism to properly machine features on both sides of a turbine blade.

With respect to the Krenz et al. patent, it is clear that first and second electrodes 48 and 50 are provided so that clean edges may be defined on the workpiece 22 (col. 3, lines 36-45). Since the Inoue/Takeda et al. combination does not disclose, teach or suggest the use of a second mechanism for positioning the electrode which also is connected to the workpiece fixture so that the electrode is automatically aligned with a designated portion of the workpiece, it is not seen where implementation of a second electrode could be accommodated in the Inoue/Takeda et al. combination.

Claims 14 and 15 relate to a third mechanism which is also connected to the first mechanism and automatically aligns a second electrode with the workpiece. While Krenz et al. discloses a second electrode for machining on the opposite side of the workpiece from the first electrode, there is nothing to suggest that the teachings of the Inoue/Takeda et al. combination would be compatible therewith.

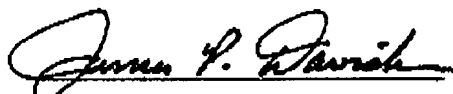
Accordingly, Applicants hereby respectfully traverse the rejection of claims 13-15 and request that such rejections be withdrawn.

It is appreciated that claims 3-12 and 17-20 stand objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Since Applicants believe that all the claims as originally presented are allowable, however, they have not amended claims 3 or 17.

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In light of the foregoing amendments and remarks, Applicants request that the examiner withdraw the rejection of all pending claims (claims 1-22) and place the application in condition for allowance. Should the examiner have any questions or desire to discuss this case in more detail, he is encouraged to contact James P. Davidson, Esq. At (513) 505-0992.

Respectfully submitted,



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